

REMARKS

The applicants submit that no new matter has been added. It is believed that this Amendment is fully responsive to the Office Action dated January 11, 2007.

Claims 5, 6, 8 - 10 and 15-17 are currently pending in this patent application, claims 1 - 2, 7 and 11 - 14 having been canceled, and claims 9 and 10 having been withdrawn from further consideration. No new claims have been added.

The following rejections are set forth in the outstanding Office Action:

(1) claims 3, 5, 6, 8 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over applicants' admitted prior art, Maeda, and Koga;

(2) claims 5, 6, 8 and 15 are rejected under 35 U.S.C. §103(a) as being unpatentable over applicants' admitted prior art, Maeda and Koga, and further in combination with Sakata;

(3) claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over applicants' admitted prior art, Maeda and Koga, and further in combination with DiStefano;

(4) claim 16 is rejected under 35 U.S.C. §103(a) as being unpatentable over applicants' admitted prior art, Maeda, Koga and Sakata, and further in combination with DiStefano;

(5) claim 17 is rejected under 35 U.S.C. §103(a) as being unpatentable over applicants'

admitted prior art, Maeda and Koga, and further in combination with Fujimoto; and

(6) claim 17 is rejected under 35 U.S.C. §103(a) as being unpatentable over applicants' admitted prior art, Maeda, Koga and Sakata, and further in combination with Fujimoto.

The applicants respectfully request reconsideration of these rejections.

The applicants submit that the discussions of the conventional art on page 2, lines 5 - 19 of the applicants' originally filed specification ion discuss that, after adhesive is coated on a substrate, heating and pressing are carried out to mount a chip. In this configuration, nothing concerning "half-thermosetting" is included. Also, nothing concerning "half-thermosetting" is included in the configuration disclosed in page 2, lines 23 - 27 of the applicants' specification in discussing the conventional art.

As to page 2, lines 28 - 36 of the applicants' specification (in the discussions regarding Japanese Laid-Open Patent Application 3-184352), the configuration discussed therein is such that, after a chip is mounted on the substrate, thermosetting adhesive is immersed between the substrate and the chip, and after that, the adhesive is heated, and is thus hardened. Such conventional art, does not however include the features that adhesive coated on the substrate is half-thermoset or is previously heated.

As to the cited prior art, relied upon by the Examiner, in Maeda, relationship between first heating and second heating does not correspond to that of the applicants' instant claimed invention.

Although, in comparison between substrate highest temperatures, the first heating > the second heating, it is not clear in this case whether or not the first heating corresponds to "half-thermosetting temperature" and the second heating corresponds to "thermosetting temperature." It is submitted that conveying speeds are different between the first heating and the second heating, and, from this difference, the substrate highest temperatures seem to be different. This can also be seen from the fact that, in the first heating in which the conveying speed is slower, the substrate highest temperature is higher. In this case, there is a possibility that the heater temperatures are the same as one another (no specific conditions are disclosed), and thus, it is the applicants' position that Maeda is similarly silent to the concept that "half-thermosetting temperature" and "thermosetting temperature" are set.

According to the applicants' instant claimed invention, the thermosetting adhesive is half-thermoset at the half-thermosetting temperature (first temperature), and is hardened at the thermosetting temperature (second temperature). Although no specific numeric values are disclosed in the applicants' specification, a heater is used to heat both in the half-thermosetting and in the thermosetting. Therefrom, the heater temperatures are different in the respective steps;

and consequently, the condition that the heater temperatures themselves are different should be assumed for the applicants' instant invention.

As to Koga, this reference is silent to a process corresponding to "half-thermosetting" of thermosetting adhesive, carried out corresponding to first fixing. Further, a chip is not pressed in a temporary fixing step.

As to Sakata, with respect to a pressing condition, it is pointed out that the first pressure is 20 kg, and the second pressure is about 20 kg. However, according to what is actually disclosed in Sakata are as follows: (1) pressing is 20 kg (see, FIG. 1, page 3, bottom left portion); pressing is 20 kg (see, FIG. 2, page 3, bottom right portion); (2) "in a temporary connection condition, * * * pressing force is about 20 kg" (see, page 4, top left portion); and actual connection is carried out with pressing force of about 20 kg (see, page 4, top left portion).

Thus, according to Sakata, "20 kg" and "about 20 kg" are not used as corresponding to "temporary fixing" and "actual fixing," respectively. In the above-mentioned condition, item (1), just 20 kg is applied both in temporary connection and in actual connection. In the above-mentioned condition item (2), "about 20 kg" is applied both for the temporary connection and for the actual connection. Consequently, the term "about" should not be regarded as a term for indicating a specific value of the pressure applied for the temporary connection and the actual

connection, but should be regarded merely in such a manner that, as in in the temporary connection and the actual connection, some error may be allowed.

The secondary references of Di Stefano and Fujimoto are narrowly relied upon by the Examiner, and do not supplement the above-discussed drawbacks or deficiencies in the teachings of the other references, as discussed above, in failing to fully meet the applicants' claimed invention. Thus, the suggested combination would still fall far short in fully meeting the applicants' claimed invention.

In view of the above comments, even if *arguendo* the teachings of the cited prior art references may be combined in the manner suggested by the Examiner, such combined teachings would still fall far short in fully meeting the applicants' claimed invention. Thus, a person of ordinary skill in the art would not have found the applicants' claimed invention obvious under 35 U.S.C. §103(a) based on the teachings of the cited prior art references, singly or in combination.

Accordingly, the withdrawal of the outstanding obviousness rejections under 35 U.S.C. §103(a) based on the cited prior art references is in order, and is therefore respectfully solicited.

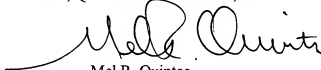
In view of the aforementioned amendments and accompanying remarks, claims, as amended, are in condition for allowance, which action, at an early date, is requested.

If, for any reason, it is felt that this application is not now in condition for allowance, the Examiner is requested to contact the applicants' undersigned attorney at the telephone number indicated below to arrange for an interview to expedite the disposition of this case.

In the event that this paper is not timely filed, the applicants respectfully petition for an appropriate extension of time. Please charge any fees for such an extension of time and any other fees which may be due with respect to this paper to Deposit Account No. 01-2340.

Respectfully submitted,

KRATZ, QUINTOS & HANSON, LLP

A handwritten signature in black ink, appearing to read 'Mel R. Quintos', written over a horizontal line.

Mel R. Quintos
Attorney for Applicants
Reg. No. 31,898

MRQ/ak/lrj/ipc

Atty. Docket No. **950107A**
Suite 400
1420 K Street, N.W.
Washington, D.C. 20005
(202) 659-2930



23850

PATENT TRADEMARK OFFICE